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10/730,887

12/10/2003

Noriko Sakashita

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11/03/2005

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EXAMINER

EGWIM, KELECHI CHIDI

ART UNIT

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

NOV 03 2005

Application Number: 10/730,887  
Filing Date: December 10, 2003  
Appellant(s): SAKASHITA ET AL.

**GROUP 1700**

\_\_\_\_\_  
Kenneth H. Salen  
For Appellant

**SUBSTITUTE EXAMINER'S ANSWER**

This is in response to the appeal brief filed 11/02/2004 and the remand by the Board of Patent Appeals and Interferences filed 09/28/2005. Please vacate the previous Examiner's Answer, and enter the following Examiner's Answer in its place.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences that will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

No amendment after final has been filed.

**(5) *Summary of Invention***

The summary of invention contained in the brief is essentially correct, except that the initial or first stage latex polymer may also be a polymer (or homopolymer) as denoted by "(co)polymer" in claim 1.

**(6) *Issues***

No specific statement of the issues is recited in the appellant's brief. The issues are as follows:

1) Whether or not claims 1-4 are anticipated under 35 U.S.C. 102(b) by or, in the alternative, unpatentable under 35 U.S.C. 103(a) over Tuzuki et al. (USPN 4,179,481).

2) Whether or not claims 1-4 are anticipated under 35 U.S.C. 102(b) by or, in the alternative, unpatentable under 35 U.S.C. 103(a) over Matsuba et al. (US 5,093,420).

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3) Whether or not claims 1-4 are anticipated under 35 U.S.C. 102(b) by or, in the alternative, unpatentable under 35 U.S.C. 103(a) over Matsuba et al. (EP 392 465)

4) Whether or not claims 1-4 are anticipated under 35 U.S.C. 102(b) by or, in the alternative, unpatentable under 35 U.S.C. 103(a) over GB 1378434.

The rejections based on Kishida et al. are hereby withdrawn in view of appellant's arguments.

**(7) Grouping of Claims**

The rejection of claims 1-4 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

4,179,481	TUZUKI ET AL.	12-1979
5,093,420	MATSUBA ET AL.	3-1992
EP 392465	MATSUBA ET AL.	10-1992
GB 1378434	-----	12-1974

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-4 are anticipated under 35 U.S.C. 102(b) by or, in the alternative, unpatentable under 35 U.S.C. 103(a) over Tuzuki et al. (USPN 4,179,481), Matsuba et al. (US 5,093,420), Matsuba et al. (EP 392 465) or GB 1378434.

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In col. 1, lines 10-12 and 55-68 and col. 2, lines 1-16, Tuzuki et al. teach two-stage polymer process additives to vinyl chloride resins, in concentrations of 0.1 to 100 parts per 100 parts of PVC, obtained by polymerizing

1 to 50 parts by weight of a monomer (II) comprising

0 to 40 % by weight of methyl methacrylate, and

51 to 100 % by weight of a monomer selected from a methacrylate ester, excluding methyl methacrylate, or an acrylate ester,

in the presence of a latex of a (co)polymer obtained by polymerizing in emulsion 99 to 50 parts by weight of a monomer mixture (I) comprising

85.71 to 100% by weight of methyl methacrylate,

the balance of other monomers except methacrylate ester,

wherein the total amount of (I) and (II) is 100 parts by weight.

Further, in col. 3, lines 35-45 and col. 6, lines 4-9, Tuzuki et al. teach that it is advantageous for the final two-stage (composite) polymers to preferably have specific viscosities of at least 0.5 in benzene, which corresponds to preferred specific viscosities of **at least** about 0.24 in chloroform (See Table 1 in the declaration filed on September 10, 2002 in appellant's parent application 09/530,202). Additives such as foaming agents (blowing agents) may be added to the vinyl chloride resins.

Matsuba et al. [(US' col. 2, lines 42-68 and col. 3, lines 1-12) or ( EP' page 3, lines 10-21)] teach two-stage polymer process additives to vinyl chloride resins, in concentrations of 0.1 to 30 parts per 100 parts of PVC, obtained by polymerizing

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5 to 40 parts by weight of a monomer (B) comprising

0 to 40 % by weight of methyl methacrylate or other vinyl monomers, and

20 to 80 % by weight of a monomer selected from a methacrylate ester, excluding methyl methacrylate, or an acrylate ester,

in the presence of a latex of a (co)polymer obtained by polymerizing in emulsion 60 to 95 parts by weight of a monomer mixture (A) comprising

50 to 95% by weight of methyl methacrylate,

5 to 50 % by weight of at least one C<sub>2</sub> to C<sub>8</sub> methacrylate ester (excluding methyl methacrylate), and

and 0 to 20 % by weight of a vinyl monomer copolymerizable therewith,

wherein the total amount of (A) and (B) is 100 parts by weight, and

wherein the final two-stage polymer has a specific viscosity of 1 or more in benzene, which corresponds to preferred specific viscosities of **at least** about 0.3 in chloroform (See Table 1 in the declaration filed on September 10, 2002 in appellant's parent application 09/530,202). Further, each of examples 1 and 4-11 in each of the Matsuba et al. references, not only exemplify two-stage polymer compositions within the presently claim composition, each provides final products with specific viscosities ranging from 2.8 to 3.4 in benzene, corresponding to specific viscosities ranging from about 0.5 to about 0.56 in chloroform.

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Matsuba et al. [(US' col. 6, lines 60-65) or ( EP' page 5, lines 39-41)] further teach that additives such as foaming agents (blowing agents) may be added to the vinyl chloride resins.

In page 2, lines 60-86 and the examples, GB 1378434 teach two-stage polymer process additives to vinyl chloride resins, in concentrations of 0.1 to 100 parts per 100 parts of PVC, obtained by polymerizing

1 to 50 parts by weight of a monomer (II) comprising

80 to 100% of a monomer selected from a methacrylate ester,

excluding methyl methacrylate, or an acrylate ester,

0 to 20 % by weight of other copolymerizable monomers,

in the presence of a latex of a (co)polymer obtained by polymerizing in

emulsion 99 to 50 parts by weight of a monomer mixture (I) comprising

over 50% of methyl methacrylate,

the balance of other monomers except methacrylate ester,

wherein the total amount of (I) and (II) is 100 parts by weight, and

Further, in page 2, lines 107-111, and page 3, lines 94-98, GB 1378434 teaches that the final two-stage polymers should advantageously have specific viscosities of at least 0.5 in benzene, which corresponds to preferred specific viscosities of **at least** about 0.24 in chloroform (See Table 1 in the declaration filed on September 10, 2002 in appellant's parent application 09/530,202). Additives such as foaming agents (blowing agents) may be added to the vinyl chloride resins.

While Tuzuki et al., Matsuba et al. or GB 1378434 do not expressly teach the specific viscosity of the seed or first stage latex (co)polymers, it is reasonable that the viscosity of the seed or first stage latexes of the prior art would possess the presently claimed specific viscosities given the composition of the polymers are essentially the same as in the claimed composition. The USPTO does not have at its disposal the tools or facilities deemed necessary to make physical determinations of the sort.

In any event, the specific viscosity of the present final stage processing aid is taught in the prior art to be at least 0.5 in benzene, which corresponds to specific viscosities of **at least** about 0.24 in chloroform. Therefore, the prior art final stage processing aid is the same as the presently claimed final stage processing aid. The patentability of the product does not depend on its method of production, so an otherwise old composition is still not patentable regardless of any new or unexpected properties or process for preparing it. In re Fitzgerald et al , 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112 - § 2112.02. See In re Marosi, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

Even if assuming that the prior art references do not meet the requirements of 35 U.S.C. 102, it would still have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive composition because the disclosure of the inventive subject matter appears within the generic disclosure of the prior art.

**(11) Response to Argument**

Appellant argues that “[b]ecause the prior art discloses a range that overlaps the claimed range, but no specific examples falling within the claimed range are disclosed, Appellant submits that a case-by-case determination must be made as to anticipation.” Appellant then continues by stating that “[I]n light of the limited specific viscosity teachings of the cited references, Appellant submits that the claimed range is not disclosed with sufficient specificity in the cited references.”

Firstly, each of Tuzuki et al. (col. 3, lines 41-45) and GB 1378434 (page 2, lines 107-111), individually teach specific viscosities of **at least 0.24** or 0.24 and above, fully encompassing that claimed by appellant. There is no overlap, the range is fully encompassed.

Secondly, with regard to Matsuba et al., each document specifically recites specific viscosities above 1 in benzene, or **above 0.30** in chloroform, which fully encompasses “at least 0.5”. Further, Matsuba et al. does contain specific examples (ranging from about 0.5 to about 0.56 in chloroform) within the claimed range (see above). Therefore, appellant’s arguments are not apposite. The claimed specific viscosity for the final product is clearly taught by each of the cited prior art.

Regarding the arguments “under 103”, Appellant’s argument of unexpected result with regard to the final product are not persuasive since **the final product**, including the required specific viscosities, **is taught by each of the prior art references**. The

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specific viscosities of the prior art processing aids are representative of and/or fully encompass the range claimed by Appellant (see above).

At the top of page 9 in the Appeal brief filed 11/02/2004, Appellant argues that "in the cited references, one or both of specific viscosities of first-step polymer and second-step polymer is/are lower than the claimed specific viscosities of the present invention." However, the specific viscosities recited in the description of the cited references are the **minimum specific viscosities** encompassing specific viscosities above the recited minimum specific viscosities.

Furthermore, while Appellant has presented inventor's Declarations (dated 09/10/2002 and 3/6/2003) to illustrate that the processing aid of the present invention has properties that are expectedly superior than the cited references, none of the examples presented in the Declarations represent the teachings in the cited references closed to the inventions being claimed by appellant. It remains unclear why appellant would choose a comparative example in the prior art as a representation of said prior art. Comparative examples are representations of inventions that are outside the scope of the invention being claim by the prior art patent.

For example, appellant could have chosen either of Example 1 and 4-11, in each of which the two-stage polymers are prepared with compositions that are consistent with the claimed two-stage polymer, including specific viscosities above 0.5 when converted to specific viscosity in chloroform.

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The argument that appellant's comparative examples 9 and 10, having final stage specific viscosities less than 0.5, have inferior properties, is not apposite since the prior art teaches final stage polymers have viscosities above 0.5.

Appellant's Declarations neither demonstrate that the prior art first stage latex polymers would not have had the claimed specific viscosities, nor does it demonstrate, even if they did have differing first stage latex polymers specific viscosities, that this would have resulting in different final processing aid polymer products.

Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113. The final two-stage polymer product in the prior art is consistent with the claimed final two-stage polymer, including with regard to the final specific viscosities.

Regarding Appellant's comments about example 17 and comparative examples 1-8, Appellant is correct that example 7 is consistent with Appellant's claims and Appellant's comparative examples are not consistent with Appellant's claims. However, this does not negate the teaching of the same inventive composition in the prior art.

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For the above reasons, it is believed that the rejections should be sustained.

**KELECHI C. EGWIM PH.D.**  
**PRIMARY EXAMINER**

Respectfully submitted,



KCE

October 27, 2005

Conferees



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David Wu



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